CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

SECRET
SECURITY INFORMATION

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THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

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SOURCE:

1. The artificial fiber plant, known as Chemosvit Svit, National Corporation, located at Svit, formerly Batizovce [4905N-2012E], Slovakia, was created by J.A. BATA as a part of the Bata concern. [See Annex A for an area sketch of the plant.] The first production unit, built in 1935, was a pilot plant headed by the chemist Ing. (fnu) RISA, an expert in the field of rayon production. After 1945 RISA was one of the managers of the Dynamit-Nobel Works in Bratislava, but was removed in 1950 because of being non-Communist. In 1952 he was a professor at the Technical University of Bratislava.

2. During 1937 the pilot plant developed into a new factory which was engaged in three main branches of production: rayon yarn; rayon clip ("staple"); and fine transparent cellophane sheets for wrapping purposes. This plant was equipped with centrifugal rayon-spinning machines, first of German, later of American make (Butterworth Phila, Smith Drum, Oscar Cohorn firms, etc.). 25X1

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3. The development of the enterprise continued rapidly, chiefly because of the activities of its young and energetic manager (fnu) LEPIK. LEPIK was an anti-Communist and therefore was arrested immediately after the coup d'etat of February 1948; he has since been held incommunicado, and as of the summer of 1952 his former collaborators were without news of him. The top executives

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of the new enterprise were selected from among executives of the mother plant at Zlin. In 1946-1947 (fnu) FRYDRYCH, a textile expert, established several new production branches, such as spinning of wool mixed with rayon clip, production of jersey, interlock, and warp texture (Kettenware) for manufacture of lingerie, and manufacture of socks and ladies' stockings. FRYDRYCH was removed from the enterprise in 1951 because of being anti-Communist. Since 1938 the enterprise had a designing department of its own which, for example, worked out equipment for continuous cellophane production and an arrangement which simplified preparation and aging of viscose. In the Summer of 1952, the designing department was headed by Ing. (fnu) NOVOTNY. The chief designer for spinning machinery was Osvald HUDECEK. The foundry and machinery shops of the enterprise /Annex B, Points #35-37/ were headed by (fnu) FRIEDLAENDER and employed about 600 persons. During the last few years both departments have been intensively engaged in the production of machinery for a new artificial fiber plant, called Zavod miru, National Corporation, in Bratislava. This machinery included chiefly centrifugal spinning, twisting, and washing machines.

4. In the Summer of 1952 there were approximately 100 centrifugal spinning machines at Chemosvit Svit. The number of employees totalled, since 1947, from 4,000 to 5,000 persons. Until the Communist coup d'etat of February 1948, Communist influence was negligible. Top positions in the enterprise were chiefly held by non-Communists and only about 150 persons out of the total number of employees were registered Party members. In 1950 the General Management of the Chemical Industry called a meeting of top executives of the Czechoslovak artificial fiber industry in Prague, and the leading chemist of the Svit Works at Svit, (fnu) BROSKA, reported on the activities of this enterprise. It was apparent from his report that the plant was working at the lowest production cost in crowns-per-kilogram and had the highest production capacity of all the plants of this kind in Czechoslovakia.

5. After the coup d'etat the enterprise began to use the name Tatrasvit, originally its cable address. As a result of the liquidation of the former Bata concern the Tatrasvit National Enterprise at Svit was broken down into separate concerns in 1951/1952. Production of rayon yarn, rayon clip, and cellophane, as well as the foundry and the machine shops, were set apart and received the name of Chemosvit Svit National Enterprise. This new enterprise was placed under the jurisdiction of the Main Administration for Artificial Fibers (Hlavni sprava, umelych vlaken), a division of the Ministry of Chemical Industry. In the summer of 1951 this Ministry established a Central Research Institute for Artificial Fibers /Annex B, Point #7/ within the enterprise. The remaining branches of production were taken away from the Svit Plant and incorporated into other national enterprises. Hosiery production was to be transferred to Revuca /4801N-2007E/. I do not know where the other production branches were to be moved to.

Production of Silon Clip

6. The Ministry of Chemical Industry ordered an experimental production unit for a silon clip, sometimes called a "staple", equipped with four polymerization chambers, to be designed and set up in 1951 at the Institute for Chemical Research on Polyamides (Ustav pro chemicky vyzkum polyamidu) in Gottwaldov. The plans for this production unit had been drawn up by Ing. (fnu) MORAVEC, the manager of this Institute, and three of his top executives, (fnu) SOCHOR, (fnu) KRENOVSKY, and Alois NAVRATIL. The production equipment was manufactured by the machinery plant of the Svit National Enterprise at Gottwaldov. The experimental production unit was established and set in operation at the Chemosvit-Svit National Enterprise at Svit (formerly Batizovce) /4905N-2012E/ in the Fall of 1951 as a constituent part of the new Central Institute for Research on Artificial Fibers which was established there in 1951. /Annex B, Point #7./

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7. Caprolactam, the basic raw material for silon production, was prepared in a similar manner as for the production of silon yarn [redacted]. Crystalline caprolactam (usually, but chemically incorrectly referred to as "lactam salt") supplied in aluminum barrels /Encl. C, Point #1a/ was weighed on a scale /Encl. C, Point #1b/ and fed by means of a transporter /Encl. C, Point #1c/ to a container /Encl. C, Point #2a/ where it was dissolved in distilled water at a temperature of 176°F and adjusted to a concentration of 70% "salt". The distilled water was supplied from a condensation tank /Encl. C, Point #5a/ and on its way to the container /Encl. C, Point #2a/ exactly measured by means of a rotameter /Encl. C, Point #5b/. One per cent of aminocaproic or oxalic acid was added to the solution as a stabilizing agent.

8. After thorough stirring, the solution was fed to a homogenizer /Encl. C, Point #2b/ located in the basement of the building. From here it was pumped automatically to an elevated tank /Encl. C, Point #3a/ beneath which was a filter unit /Encl. C, Point #3b/. A mixer /Encl. C, Point #3c/, located below the filters, ensured the homogeneity of the solution. From here the caprolactam solution was supplied to a container /Encl. C, Point #4a/ which, by means of a float, maintained an even pressure throughout the system.

9. The polymerization chamber was fed automatically through a float valve /Encl. C, Point #4b/ to ensure both a constant level and a continuous flow of caprolactam solution. The float was connected to an indicator /Encl. C, Point #4c/ for visual observation. The caprolactam flowed down the shaft of the float, which was hot from the high temperature maintained in the chamber, and was at the same time heated above 212°F. As a result, the water evaporated before the solution could reach the level of the liquid caprolactam. The polymerization chamber was equipped with partitions arranged crosswise /not shown in the sketch/ to avoid caprolactam monomer from penetrating the higher polymer. A pump /Encl. C, Point #4d/ with a capacity of 6,000 cu. mm. per revolution fed the polymer through a filter /Encl. C, Point #4e/ to a nozzle /Encl. C, Point #4f/, which had a diameter of 60 mm. and was provided with 120 openings, each 0.4 mm. wide.

10. The filament coming out of the nozzle wound onto a drum /Encl. C, Point #6a/ 1,000 mm. in diameter and about 200 mm. in width, the peripheral speed of which was at least 1,000 m. per minute. The filament was stretched while being wound onto the drum by means of a traversing mechanism /Encl. C, Point #6b/. There were two of these drums placed alongside each other but each was driven separately. As soon as one drum was covered by a layer of about 10 mm. thickness, the filament was switched over to the other drum where winding continued. Meanwhile, the first drum stopped revolving and the ring formed by wound-on filament was cut across at a certain spot by a hand-operated, electrically heated knife, so that a band 10 mm. thick, 3,142 mm. long, and about 150 mm. wide was formed. The filament was never wound onto the entire width of the drum and the marginal parts were left free.

11. The band thus obtained was cut into clip 60 mm. long by a cutting machine working on the German "gru-gru" principle. This clip was eluted in a pressure washing machine /Encl. C, Point #8/ by means of circulating warm water which removed the residual caprolactam monomer. The washed clip then went to a centrifuge /Encl. C, Point #9/ and subsequently to a feeder /Encl. C, Point #10/ which separated the chip clusters and fed the clip uniformly into a drying chamber /Encl. C, Point #11/. Here its water content was reduced to about 4.5% of dry weight. The clip was finally loaded into bags, an operation which for the time being was carried out by hand.

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However, as of the Summer of 1952, it was planned to set up an automatic packing arrangement consisting of an exhauster tube [Encl. C, Point #12a], a ventilator [Encl. C, Point #12b], and a "cyclone" [Encl. C, Point #12c]. This would enable the clip to be separated from the air stream, and a bag [Encl. C, Point #12d] was to be fastened to the exhauster tube.

12. Each of the four polymerization chambers produced about 2.4 kg. of clip per hour. The unit was operated by about 10 persons per shift. The clip was delivered to unidentified Czechoslovak textile plants.

13. The year 1952 was considered to be a testing period for experimental production of silon clip. By the Summer of 1952, however, no clear results had yet been obtained. A development program for research on technical equipment was in preparation. The object was to make continuous production possible with a minimum of personnel. The most difficult problem encountered was the development of a cutting machine operating continuously at a minimum speed of 1,000 m. per minute. A prototype of such a machine was designed in the Summer of 1952 at the Silon National Enterprise in Plana nad Luznici [49 21N-14 42E].

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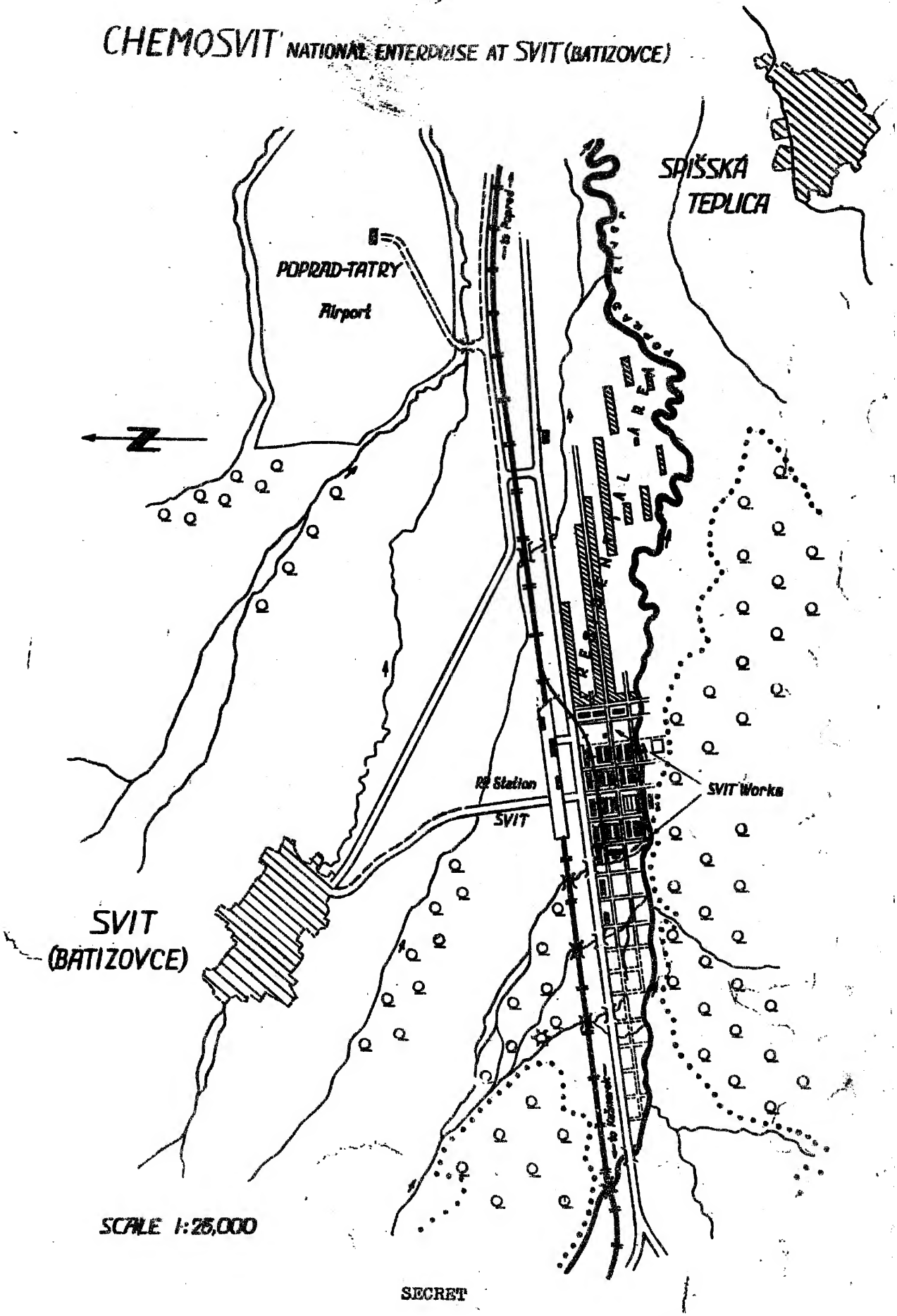
Annexes: A. Chemosvit, n.p., at Svit
B. Chemosvit, n.p., in Svit
Enclosure: C. Experimental Production of Silon Clip at the "Chemosvit Svit" National Enterprise (2 pages) (ORR)

CHEMOSVIT NATIONAL ENTERPRISE AT SVIT (BATIZOVCE)



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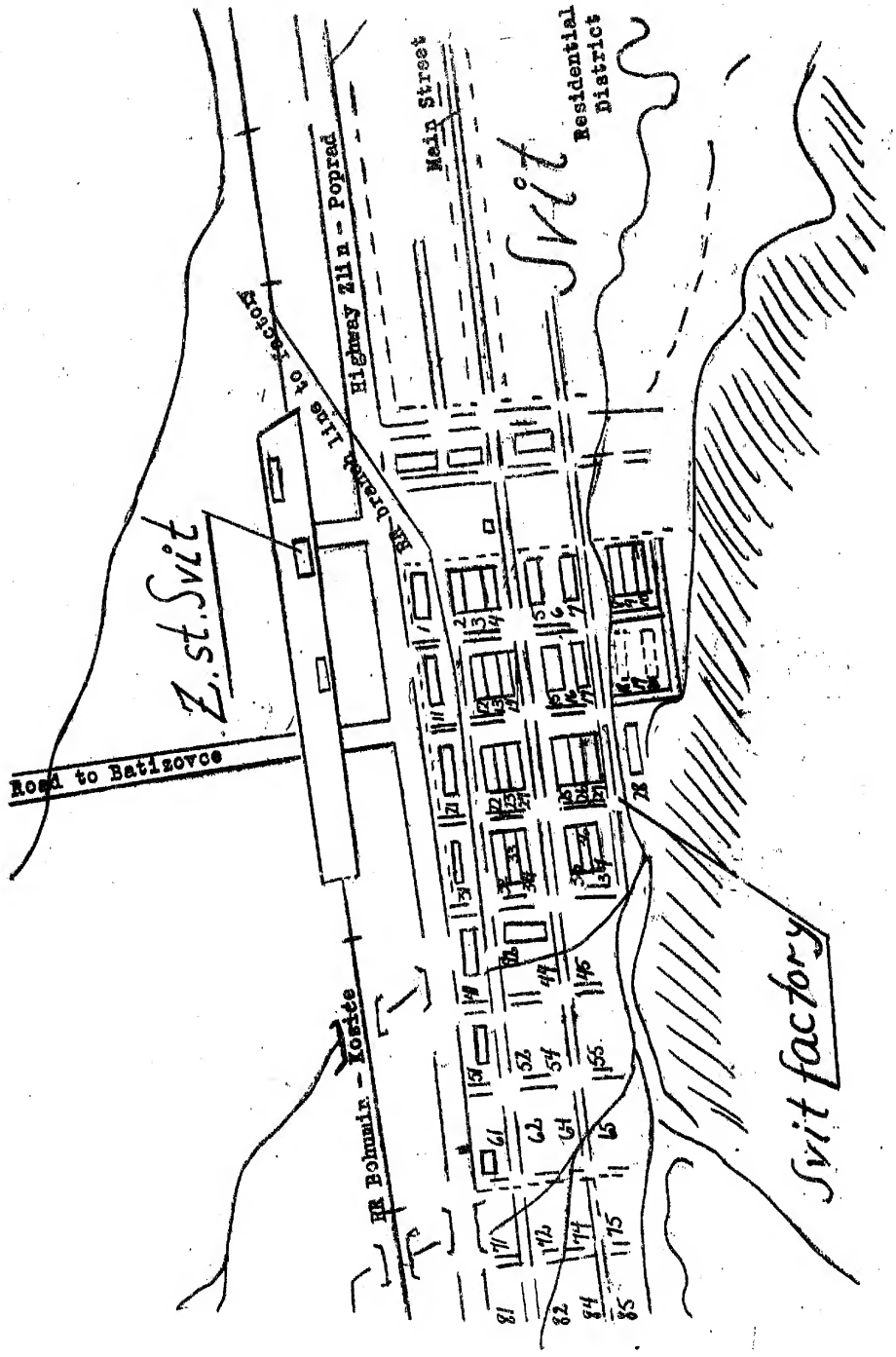

Chemosvit Plant, n.p. in Svit near Poprad, Slovakia, CSR.
Scale: 1:10,000

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Legend

1. Ten-story warehouse for finished goods
2. Five-story building
3. Single-story building — Wool spinning & various textile shops
4. Five-story building
5. Five-story office building with porter's lodge
7. Five-story building; Central Research Institute for Artificial Fibers
9. Single-story building
10. Single-story building — Dyeing shops
11. Auxiliaries production shop
12. 13. 14. Rayon yarn processing shops
15. Chemical Laboratory
17. Unknown
21. Auxiliaries production shop
22. 23. 24. Rayon yarn production shops, single-story
25. 26. Rayon clip production shops, single-story
27. Cellophane production shop, single-story
28. Unknown
31. Auxiliaries production shop
32. 33. 34. Rayon yarn production shops, single-story
35. Two-story building
36. Single-story building — Machine shops
37. Foundry, single-story
41. Coal warehouse
42. Power station with two steel chimneys
51. Unknown
61. Unknown

Note: Numbers of buildings given in the legend are in accordance with the original numbering of these buildings as used by the Svit Plant. All buildings have a standardized size of 20 x 80 m. Numbers not given in the above legend mean plots of land to be used for possible enlargement of the enterprise.